

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Robert P. Rouen	§	Art Unit:	3672
		§		
Serial No.:	10/711,820	§	Confirmation No.:	5819
		§		
Filed:	October 7, 2004	§	Examiner:	David L. Andrews
		§		
For:	Gas Lift Apparatus and	§	Atty. Dkt. No.:	SHL.0343US (68.0496)
	Method for Producing a Well	§		

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Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**REPLY BRIEF**

Sir:

The following sets forth Appellant's Reply to the Examiner's Answer dated October 15, 2010.

**A. REPLY TO EXAMINER'S ANSWER REGARDING THE § 103 REJECTION OF CLAIMS 1, 2, 4-6, 24, 26 OVER McCULLOCH IN VIEW OF MALONEY**

Claim 1 recites a gas injection tool comprising, *inter alia*:

a plurality of gas lift valves attached to the tubular member of a gas injection tool that is separate from and not in contact with a tubing string for removing fluid from the wellbore.

The Examiner conceded that McCulloch fails to disclose the foregoing subject matter of claim 1. Examiner's Answer at 4. Instead, the Examiner cited Maloney as purportedly disclosing the plurality of gas lift valves as recited in claim 1. *Id.*

As discussed in detail in the Appeal Brief, it is clear that the hypothetical combination of McCulloch and Maloney would not have led to the subject matter of claim 1. Moreover, as discussed in detail in the Appeal Brief, no reason existed that would have prompted a person of

ordinary skill in the art to combine the teachings of McCulloch and Maloney to achieve the subject matter of claim 1.

As discussed in the Appeal Brief, the valves 30 in Maloney are unloading valves. Maloney specifically teaches that these unloading valves 30 are **part of the production string 21**. Maloney, 3:28-32 (“The production string 21 further includes unloading valves 36 above the packer 18 and unloading valves 30 below the packer.”). The teachings of Maloney thus contradict the subject matter of claim 1, which specifically specifies that the gas lift valves are attached to the tubular member of a gas injection tool that is **separate from and not in contact with a tubing string** for removing fluid from the wellbore.

The Response to Arguments section of the Examiner’s Answer argued that the positioning of the unloading valves 30 in Maloney “is arbitrary.” Examiner’s Answer at 6. The Examiner argued that, although Maloney describes the valves 30 as being part of the production string, such valves are “shown in the drawings [being] outside the production string ....” *Id.* The Examiner further argued that a person of ordinary skill “would recognize that in the system of Maloney, the valves would perform equivalently for their intended function regardless of which string they are physically on, as long as they are intermediate a flow from the sidestring to the production string.” *Id.*

The foregoing allegations are incorrect. As specifically noted in Maloney, the unloading valves 30 “allow gas to enter the production string 21 from **either** the casing annulus 35 **or** from the sidestring 28.” Maloney, 3:30-32 (emphasis added). Thus, Maloney specifically teaches a specific placement of the unloading valves 30 (as part of the production string 21) that provides flexibility in allowing gas flow from a casing annulus or from a sidestring. If the valves 30 of Maloney were to be provided at the sidestring instead of at the production string, as proposed by

the Examiner, then that would defeat the intended flexibility of the production string 21 described in Maloney, which has unloading valves 30 being part of the production string 21 to provide flexibility in accepting gas from either the casing annulus or the sidetrack. In other words, the Examiner is proposing a modification of Maloney that would defeat a specific purpose of arranging unloading valves 30 on the production string 21 of Maloney.

As explained by *Depuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314 (Fed. Cir. 2009), an asserted combination of reference teachings is proper only if the combination would have worked for its intended purpose. *Depuy*, 567, F.3d at 1326. If a purported combination would have rendered a prior art reference inoperable for its intended purpose, then that is an indication of non-obviousness. *Id.* Here, the proposed modification of Maloney by the Examiner would have **prevented** the ability of the production string 21 to accept fluid flow from the surrounding casing annulus, which is a specific stated feature of the arrangement proposed by Maloney.

Additionally, McCulloch specifically discloses valves 44 and 45 provided at the upper end of the tubular extension member 40. McCulloch recognizes that no valves can be provided at the lower portion of the tubular extension member 40 because such lower portion of the tubular extension member 40 has to be provided through a passageway 30 of a packing member 23 (*see* Figure 1 of McCulloch). Significantly, note that the tubular extension member 40 is designed to be sealingly engaged inside the passageway 30 (*see* sealing element 41 in Figure 2 of McCulloch), and is also designed to be **retrievable** by a fishing tool 71 (*see* Figure 3 of McCulloch). McCulloch, 3:26-32. If gas lift valves were to be incorporated into the lower portion of the tubular extension member 40 of McCulloch, as suggested by the Examiner, then that would render it impossible for the tubular extension member 40 to pass through the

passageway 30 of the packing member 23 (for **retrieving**), since provision of such gas lift valves would increase the outer diameter of the tubular extension member 40. Therefore, the proposed modification of McCulloch made by the Examiner would render the McCulloch apparatus inoperative for its intended purpose (namely provision of a tubular extension member that is sealingly engageable inside the passageway 30 of the packing member 23, and that is **retrievable** by passing through such passageway 30). This is a strong indication that a person of ordinary skill in the art would not have been prompted to make the modification of McCulloch based on the teachings of Maloney as proposed by the Examiner.

The Response to Arguments section of the Examiner's Answer responded to the foregoing by arguing that Fig. 1 of the present application shows valves that "appear too large to fit within the packer passageway with the tubular." Examiner's Answer at 8. However, equating Fig. 1 of the present application with the teachings of McCulloch and implying that they provide the same design is improper. McCulloch specifically teaches that the tubular extension member 40 is designed to be **retrievable** by a fishing tool 71 that is shown in Fig. 3 of McCulloch. What this means is that the tubular extension member has to pass through the inner passageway 30 of a packing member 23, as depicted in Fig. 1 of McCulloch. Fig. 1 of the present application, on the other hand, discloses a design that does not require retrieving of the injection tool 60. Therefore, Fig. 1 of the present application does not contradict Appellant's arguments.

The Examiner further argued that a person of ordinary skill in the art "would have good reason and the skill to choose valves and an engineering solution which would allow the member to pass its passageway and provide a sealing engagement." *Id.* This allegation by the Examiner finds no support in the teachings of Maloney and McCulloch. As specifically depicted in Maloney, its unloading valves 30 protrude from the production string 21. A similar arrangement

of these unloading valves on the tubular extension member 40 would mean that the tubular extension member 40 would not be **retrievable** through the packing member 23 of McCulloch.

It is thus clear that the proposed modification of the tubular extension member 40 of McCulloch made by the Examiner would render the McCulloch apparatus inoperative for its intended purpose, namely provision of a tubular extension member that is **retrievable** by passing through a passageway 30 (in which the tubular extension member was sealingly engaged).

In view of the foregoing and in view of the arguments presented in the Appeal Brief, it is clear that the foregoing claims are non-obvious over McCulloch and Maloney.

#### **B. CONCLUSION**

The remaining arguments presented in the Examiner's Answer have already been addressed either above or in the Appeal Brief. Therefore, reversal of the final rejections is respectfully requested.

Respectfully submitted,

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/Dan C. Hu/

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